

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-6. (Canceled)

7. (Currently Amended) A flow through isolation valve, ~~said isolation valve disposed around an axis of rotation~~, said isolation valve comprising:
at least two opposing valve ends ~~disposed around said axis of rotation~~;
a rotor disposed between said valve ends, said rotor being rotatable relative to said valve ends, between a first position and a second position an axis of rotation of said rotor being one of parallel and coincident with the axis of rotation of said isolation valve, ~~said rotor disposed such that orientation of said rotor can change by rotation around the axis of rotation of said rotor~~, said rotor having
an outer surface having at least first and second openings on said outer surface,
at least two surfaces each intersecting said outer surface,
~~a flow through conduit~~ an internal rotor passageway having an opening on a first of said at least two surfaces intersecting said outer surface and an opening on a second of said at least two surfaces intersecting said outer surface;
a first flow through conduit having an opening on said outer surface coincident with said first opening on said outer surface and an opening on said first of said at least two surfaces intersecting said outer surface,
a second flow through conduit having an opening on said outer surface coincident with said second opening on said outer surface and an opening on said second of said at least two surfaces intersecting said outer surface,
~~at least one~~ a first blank opening on said first of said at least two surfaces intersecting said outer surface,
~~at least one~~ a second blank opening on said second of said at least two surfaces intersecting said outer surface,
~~a first sealing annulus for sealing said openings on said first of said at least two surfaces intersecting said outer surface, and~~
~~a second sealing annulus for sealing said openings on said second of said at least two surfaces intersecting said outer surface;~~
a first ~~[[pin]]~~ isolation valve pin having ~~[[an]]~~ a first internal conduit, ~~said first pin isolation valve disposed to move along said axis of rotation of said isolation valve through one of said valve ends; and~~

~~said first pin isolation valve movably disposed so that said internal conduit is capable of fluidically communicating with said at least one blank opening on said first of said at least two surfaces intersecting said outer surface,~~

~~said first pin isolation valve movably disposed so that said internal conduit is capable of fluidically communicating with said flow through internal conduit having an opening on said outer surface and an opening on a second of said at least two surfaces intersecting said outer surface;~~

~~a second [[pin]] isolation valve pin, said second pin isolation valve disposed to move along the axis of rotation of said isolation valve through another one of said valve ends, said pin isolation valve including an having a second internal conduit;~~

~~said second pin isolation valve movably disposed so that said internal conduit is capable of fluidically communicating with said at least one blank opening on said second of said at least two surfaces intersecting said outer surface,~~

~~said second pin isolation valve movably disposed so that said internal conduit within said second pin isolation valve is capable of fluidically communicating with said flow through conduit having an opening on said outer surface and an opening on said second of said at least two surfaces intersecting said outer surface~~

wherein said first isolation valve pin is mounted for movement relative to a first one of said valve ends such that,

when said rotor is moved into the first position, said first isolation valve pin is movable to engage said first blank port, and

when said rotor is moved into the second position, said first isolation valve pin is movable to engage said first open port such that said first internal conduit is in fluid communication with said first flow through conduit, and

wherein said second isolation valve pin is mounted for movement relative to a second one of said valve ends such that,

when said rotor is moved into the first position, said second isolation valve pin is movable to engage said second blank port, and

when said rotor is moved into the second position, said second isolation valve pin is movable to engage said second open port such that said second internal conduit is in fluid communication with said second flow through conduit.

8-9. (Canceled)

10. (Original) The flow through isolation valve according to claim 7, wherein said rotor further comprises:

a rotor clamp having an outer surface and an inner surface, the inner surface surrounding at least a portion of the outer surface of said rotor,

a first opening on the outer surface of said rotor clamp penetrating said rotor clamp to coincide with said first opening on the outer surface of said rotor, and

a second opening on the outer surface of said rotor clamp penetrating said rotor clamp to coincide with the second opening on the outer surface of said rotor.

11. (Currently Amended) The flow through isolation valve according to claim 10, further comprising ~~at least one of a (a)~~

a third ~~[[pin]]~~ isolation valve pin, and

~~[[b)]]~~ a fourth ~~[[pin]]~~ isolation valve pin;

said third ~~[[pin]]~~ isolation valve pin having ~~[[an]]~~ a third internal conduit, said third ~~[[pin]]~~ isolation valve pin disposed within said first opening on said outer surface of said rotor clamp so that said third internal conduit of said third ~~[[pin]]~~ isolation valve pin is disposed to be in fluidic communication with said first flow through conduit ~~opening on the outer surface of said flow through conduit having an opening on the outer surface and an opening on the first of said at least two surfaces intersecting the outer surface of said rotor,~~

said fourth ~~[[pin]]~~ isolation valve pin having ~~[[an]]~~ a fourth internal conduit, said fourth ~~[[pin]]~~ isolation valve pin disposed within said second opening on the outer surface of said rotor clamp so that said fourth internal conduit of said fourth ~~[[pin]]~~ isolation valve pin is disposed to be in fluidic communication with said second flow through conduit ~~opening on the outer surface of said flow through conduit having an opening on the outer surface and an opening on said second of said at least two surfaces intersecting the outer surface of said rotor.~~

12. (Currently Amended) The flow through isolation valve according to claim 10, wherein said rotor clamp further comprises drive means for driving said rotor to rotate ~~around the axis of rotation of said rotor.~~

13. (Withdrawn) The flow through isolation valve according to claim 12, wherein said rotor clamp drive means comprises a gear drive operator.

14. (Canceled)

15. (Currently Amended) The flow through isolation valve according to claim 7, wherein at least one of said valve ends comprises:

a stator enclosing ~~the at least one pin~~ one of said first and second isolation valve pins, said stator adjacent to said rotor;

a sealing layer enclosed within said stator and enclosing said ~~at least one pin~~ one of said first and second isolation valve pins for sealing said ~~at least one pin~~ one of said first and second isolation valve pins;

a Belleville spring washer;

a Belleville spring;

a load washer; and

a spherical nut,

said Belleville spring washer, said Belleville spring, said load washer and said spherical nut axially arranged to impose an axial force for sealing said sealing layer enclosing said one of said [[pin]] first and second isolation valve pins.

16. (Original) The flow through isolation valve according to claim 15, wherein said sealing layer is comprised of at least one of PEEK (polyetheretherketone) and PTFE (polytetrafluorethylene)

17. (Original) The flow through isolation valve according to claim 7, wherein said rotor is comprised of PEEK blend.

18. (Original) The flow through isolation valve according to claim 8, wherein said rotor clamp is comprised of stainless steel.

19. (Original) The flow through isolation valve according to claim 18, wherein said stainless steel is Type 316 stainless steel.

20. (Withdrawn) The flow through isolation valve according to claim 7, wherein either of said first and second pin isolation valves is fluidically coupled to a sample loop of a face seal valve of a high pressure liquid chromatography (HPLC) system.

21. (Withdrawn) The flow through isolation valve according to claim 11, wherein either of said third and fourth pin isolation valves is fluidically coupled to a pump supplying high pressure liquid to a face seal valve of a high pressure liquid chromatography (HPLC) system.

22. (Withdrawn) The flow through isolation valve according to claim 11, wherein either of said third and fourth pin isolation valves is fluidically coupled to a column discharging high pressure liquid from a face seal valve of a high pressure liquid chromatography (HPLC) system.

23-51. (Canceled)

52. (New) The flow through isolation valve according to claim 12, wherein said rotor clamp drive means comprises a handle operator.